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Cotton varieties for Louisiana: a preliminary report

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COTTON VARIETIES FOR LOUISIANA

A Preliminary Report.

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COTTON VARIETIES FOR LOUISIANA

PRELIMINARY REPORT*

By H. B. Brown

In 1928 the cotton crop of the United States amounted to 14,478,000 bales, and on December 1, 1929, the 1929 crop was estimated at 14,919,000 bales. The actual production for 1929 will doubtless be very near that figure.

According to data collected by the Bureau of Agricultural Economics, U. S. Department of Agriculture, bales of the 1929 crop, ginned prior to November 1, had a staple length as follows:

Staple length in inches	Bales	Per cent
13/16 and under	2,220,800	20.4
7/8	4,063,700	37.3
15/16	2,092,700	19.2
1 and 1 1/32	1,261,400	11.6
1 1/16 and 1 3/32	663,600	6.1
1 1/8 and 1 5/32	465,500	4.3
1 3/16 and 1 7/32	107,900	1.0
1 1/4 and over	6,800	0.006

Data on the grade of the bales of the 1929 crop, ginned prior to November 1 ran as follows:

Grades ‡	Bales	Per cent
White, middling and better	8,204,900	75.4
White, strict low and low middling	1,451,000	13.3
White, below low middling	39,500	0.4
Spotted and Yellow Tinged	969,500	8.9
Light Yellow Stained, Yellow Stained, Gray, and Blue Stained	4,200	†

* This preliminary report is issued on account of the demand from growers and county agents for data on cotton varieties in Louisiana. The Experiment Station has not issued a bulletin on cotton varieties for several years.

‡ A much higher percentage of low grade cotton will be found in the bales ginned after November 1.

† Less than 0.1%.

The figures presented by the Bureau of Agricultural Economics in the tables and in other reports are based on a study of samples from all the bales ginned by a large number of representative gins located over the entire Cotton Belt. This is probably the most accurate data ever collected on the grade and staple length of the American cotton crop.

TABLE I
COTTON PRODUCTION BY STATES

State	Acreage For 1929 Crop		Yield Per Acre Left For Harvest			Production (Ginnings) 500 lbs. gross wt. bales (a)		
	Left for Harvest	In Cultivation July 1	10-yr. average 1918-1927	1928	1929 (Dec. 1 est.)	1927 crop (b)	1928 crop (b)	1929 crop Dec. 1 est. (b)
	Thous. Acres	Thous. Acres	Lbs.	Lbs.	Lbs.	Thous. bales	Thous. bales	Thous. bales
Virginia	88	89	246	265	250	31	44	46
N. C.	1,782	1,818	260	215	197	861	836	735
S. C.	2,183	2,228	185	147	185	730	726	845
Georgia	3,782	3,847	140	132	170	1,100	1,030	1,345
Florida	95	97	105	97	145	17	19	29
Missouri	343	350	249	210	300	115	147	215
Tennessee	1,120	1,137	181	185	220	359	428	515
Alabama	3,589	3,633	145	150	178	1,191	1,109	1,335
Mississippi	4,071	4,133	177	175	225	1,355	1,475	1,915
Louisiana	2,050	2,079	152	166	189	548	691	810
Texas	17,872	18,912	133	138	106	4,352	5,106	3,950
Oklahoma	4,492	4,655	148	136	128	1,037	1,205	1,200
Arkansas	3,834	3,900	166	162	186	1,000	1,246	1,490
N. Mexico	130	132	(c)276	360	309	70	88	84
Arizona	226	227	283	357	330	(d) 91	(d)149	(d)156
California	309	317	282	378	375	91	172	242
Other	15	15	(c)194	152	223	7	7	7
U. S. TOTAL	45,981	47,569	155.8	152.9	155.3	12,955	14,478	14,919
Lower Cal. (e)	147	151	....	239	260	45	80	80

(a) Not including production of linters which is usually about 6% as much as the lint. (b) Allowances made for cross State ginnings. (c) Less than a 10-year average. (d) Including 25,000 bales Egyptian in 1927, 30,000 bales in 1928 and 34,000 bales in 1929. (e) Data for Lower California (Old) Mexico are NOT included in California figures NOR in United States total.

TABLE II

COTTON PRODUCTION IN LOUISIANA BY PARISHES

Number of Ginneries in 1928 and Quantity of Cotton, Exclusive of Linters, Ginned from the Crops of 1926 to 1928, by Parishes.

County or parish	Ginneries		Total Quantity Ginned Number of equivalent 500 pound bales			Number of Bales Ginned to Dec. 13 (Counting Round as Half Bales)		
	Active	Idle	1928	1927	1926	1928	1927	1926
The State	745	132	690,958	548,026	829,407	675,262	535,674	772,013
Acadia	9	1	15,964	10,457	11,822	15,841	10,559	11,856
Allen	4	..	1,769	1,719	2,706	1,837	1,779	1,226
Ascension	3	..	585	595	1,007	601	632	1,030
Avoyelles	30	5	18,296	13,061	27,705	17,673	12,850	27,967
Beauregard	3	..	3,358	1,665	2,611	3,263	1,661	2,551
Bienville	19	12	23,037	19,292	35,094	23,000	19,367	34,454
Bossier	30	5	26,870	15,889	25,896	25,426	15,472	22,312
Caddo	40	4	66,637	44,915	61,800	62,813	44,099	54,119
Calcasieu	8	..	5,349	2,761	5,001	5,286	2,797	4,962
Caldwell	7	..	4,791	1,928	6,300	4,713	1,830	4,088
Cameron	4	..	1,913	2,028	2,429	1,843	2,033	938
Catahoula	14	3	9,012	4,880	13,917	9,054	4,392	12,601
Claiborne	23	1	27,585	30,718	38,446	26,987	29,195	36,774
Concordia	19	10	6,694	2,356	13,033	6,520	1,517	10,986
DeSoto	26	2	28,116	19,232	33,085	27,589	19,172	31,869
E. Baton Rouge	5	1	4,042	3,872	4,653	3,994	3,996	4,862
E. Carroll	17	..	21,158	13,580	20,140	19,097	12,438	14,901
E. Feliciana	8	2	4,433	6,521	8,765	4,454	6,354	8,641
Evangeline	17	..	15,257	18,220	15,928	15,422	18,357	16,301
Franklin	25	4	35,974	28,175	41,720	34,796	26,630	38,667
Grant	9	4	7,394	5,909	9,038	7,579	5,866	9,063
Iberia	4	1	1,874	1,778	1,755	1,810	1,711	1,723
Jackson	10	..	8,234	9,269	13,388	8,340	9,201	12,985
Jefferson Davis	7	..	5,826	4,380	6,614	5,852	4,401	6,607
Lafayette	15	1	19,191	15,747	16,493	18,856	15,729	16,531
LaSalle	3	2	828	(1)	711	798	(1)	607
Lincoln	18	3	24,414	22,256	31,998	24,542	21,994	30,485
Madison	15	8	11,402	2,812	15,449	10,847	2,441	12,614
Morehouse	15	5	19,984	17,267	21,000	20,032	16,398	18,229
Natchitoches	36	7	28,635	24,366	31,784	28,073	24,047	31,169
Ouachita	13	4	13,052	10,497	17,123	13,094	10,168	15,816
Pointe Coupee	14	5	5,746	4,635	11,701	5,795	4,616	11,492
Rapides	23	3	14,966	20,962	25,387	14,797	20,712	24,673
Red River	17	..	21,641	12,585	22,733	20,820	12,451	21,086
Richland	30	7	34,443	22,379	33,034	33,304	21,624	30,696
Sabine	14	2	11,375	10,096	18,027	11,280	9,944	17,468
St. Helena	3	2	1,101	1,341	2,501	1,159	1,359	2,388
St. Landry	35	5	32,045	29,132	42,329	31,774	28,666	42,336
St. Martin	5	..	4,068	(1)	5,319	3,956	(1)	5,396
St. Tammany	3	1	225	261	1,041	251	283	1,082
Tangipahoa	8	..	2,226	3,165	4,848	2,264	3,191	4,675
Tensas	27	13	15,447	8,425	20,310	14,801	7,729	14,686
Union	20	2	16,199	17,999	23,165	16,025	17,870	21,987
Vermilion	8	..	11,055	7,391	7,992	11,335	7,136	8,061
Vernon	9	1	3,172	2,651	4,104	3,199	2,546	3,963
Washington	22	3	6,784	8,759	12,367	7,196	9,236	12,375
Webster	17	1	21,096	17,952	26,416	20,203	17,385	24,598
W. Carroll	11	..	19,375	13,875	15,885	18,925	13,674	15,076
W. Feliciana	5	..	1,670	2,546	3,147	1,771	2,647	3,193
Winn	10	1	4,823	5,686	9,981	4,807	5,698	8,856
All Other	8	1	1,827	2,041	1,709	1,568	1,821	992

(1) Included in "All other counties" to avoid disclosure of individual operations.

The cotton crop in Louisiana in 1929 was estimated on December 1 at 810,000 bales, a yield of 189 pounds of lint per acre. This was the best crop since 1926, and exceeded the ten year average by 235,000 bales.

The grading and stapling of the Louisiana crop is not reported separately from the national crop but the figures, if available, would probably be much the same as given in the tables on page 1. In the delta region of the northeastern part of the State, and on alluvial lands along the Mississippi River throughout the State, long staple cotton is grown principally. In the Red River valley and over most of the hill lands of the State short stable cotton is grown nearly altogether.

According to estimates made by the county agents there was growing in 47 parishes‡ in Louisiana in 1926 an acreage of different varieties as shown below:

Variety	Acreage	Per cent of crop
Half and Half	628,038	39.2
Cleveland	368,588	23.0
Mixed varieties	254,468	15.8
Delfos	221,772	13.2
D. & P. L. No. 4	22,896	1.4
Mebane Triumph	19,675	1.2
Toole	17,500	1.1
Salsbury	15,950	0.9
Brown No. 1	15,000	0.9
Rowden	7,875	*
Boykin	6,105	*
Money Maker	5,736	*
Acala	4,500	*
Cook	4,000	*
Rucker	3,798	*
Bank Account	2,000	*
Little Brandon	2,000	*
King	1,000	*
D. & P. L. No. 5	800	*
Lone Star	300	*
Dixie-Triumph	100	*

‡ In most cases the parishes not reported produce little or no cotton.

* Less than one-half of one per cent.

Since 1926 there have been some changes in acreage of the different varieties. A lower acreage of mixed varieties is planted now and more of Wilson Cleveland, Delfos, D. & P. L. No. 4, and Dixie-Triumph. D. & P. L. No. 5 is not grown at present, but there is a considerable acreage of D. & P. L. No. 6 and No. 4 - 8. The present indications are that the acreage planted to Half and Half in 1930 will be much reduced.

A COTTON VARIETY

To be worthy of a variety name a cotton should be of a distinct type; that is, have some definite characteristics which mark it as being different from all other named varieties. At present there are so called varieties grown commercially that do not merit names; they do not represent different kinds of cotton. Losses may come to growers on account of this because it frequently happens that a change of variety is made at considerable expense simply because there was a new variety name put out and the variety highly advertised. A movement is on foot at present to provide for the official registration of all true cotton varieties of merit. This is to be Nation wide in scope and should be of some aid in fostering the sale of good varieties.

IMPORTANCE OF THE VARIETY PLANTED

Probably a good many cotton growers do not realize the importance of the variety planted, or its adaptation to their land. Under our present economic conditions, if cotton is grown profitably, a high yield must be produced, but a good yield will not be made unless a well adapted variety is planted.

Different varieties differ greatly in their adaptations. Some varieties do well in one locality and poorly in another just a few miles away. In fact, the adaptation may be narrowed even more—a variety may do well in one field and poorly in an adjoining one.

The difference in value and adaptation of various cotton varieties comes out in a striking way in variety tests that are conducted by the various experiment stations in the South. In these tests some twenty or more varieties are planted on one small piece of land. Here the land is practically the same for all the varieties; they are all planted the same day, given like fertilization and culture. An effort is being made to make conditions the same for all so that any difference in yield will be due to inherent differences

in the variety itself. It is rather surprising what differences do appear where a number of varieties are grown under nearly identical conditions. In the Bluff Land variety test at Baton Rouge in 1929, the most productive variety produced lint and seed that were worth $106.59 per acre. Another variety in adjoining rows throughout the test had a total value of $53.19. The two had an equal chance but one made twice as much cotton as the other. One was not suited to the land, or in other words, was not adapted to it, while the other was well adapted. In the Alluvial Land test at Baton Rouge the past season the products of the best variety were worth $116.11, while the products of the poorest variety were worth $80.26. In another test which was conducted in the Red River valley near Shreveport, the total value of the best variety was $89.22, and the poorest $35.13. Figures similar to the ones just given may be found in the results of almost any variety test. Many illustrations could be given. It costs no more to grow a good variety than a poor one, yet the better one may give twice the monetary returns. It frequently happens that farmers grow, year after year, a variety not very well adapted to their land and do not know that it is not a first class variety. Unless two or more varieties are grown together in the same field and under nearly identical conditions it is difficult to judge comparative merits.

There seems to be considerable difference in the adaptation of varieties to conditions prevailing in different states. In Texas, for instance, a cotton of the Mebane Triumph type is most commonly recommended; in Arkansas new strains of Rowden developed by the Arkansas Experiment Station usually make the best showing; in Tennessee Trice was long a favorite and probably is still one of the best varieties grown in the State; in the Mississippi Delta in Mississippi, no variety is as popular as Delfos; in Alabama some strain of Cook is recommended most commonly. Cook has ranked high in tests there for a number of years. In Georgia, College No. 1 has been highly prized but in no other state has it made an exceptionally good showing. In South Carolina, Cleveland is probably the most popular variety. It, however, has made a good showing in several states. In North Carolina, Mexican - 6 is a favorite variety but it is not grown extensively elsewhere. Nearly every variety in the list given is most popular in the state where it originated.

LOUISIANA COTTON VARIETY STUDIES*

The Louisiana Experiment Stations have been conducting cotton variety tests for a good many years, but aside from brief sketches in annual reports nothing bearing on this subject has been published recently. This brief report covers in particular experimental data gathered by the writer and his co-workers since 1926.

In 1927 variety test work was started in several different sections of the State to learn something of the adaptation of various varieties and strains to different soil types and prevailing conditions. An effort was made to have these tests conducted in such a way that reliable data would be obtained. Seed of the various varieties was secured from the originators in most cases, planted in small plats with several replications, thinned uniformly, and much care used in carrying on the work at all stages of the experiment.

The following tables give much data on the comparative production of the various varieties and strains used in the tests, when grown under conditions prevailing in various parts of the State, and also important data on lint percentage, staple length, boll size, etc. The notes following the tables are intended to describe the conditions under which particular tests were made and point out the main conclusions to be drawn.

* John P. Gray and S. P. Landry assisted with the cotton work in 1929. Credit is due them and the growers with whom co-operative tests were conducted.

TABLE III

COTTON VARIETY TEST

Bluff Land, Baton Rouge, 1929.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929	3 Year Av. in Rank
1. Wann. Cleveland	1098.7	36.6	402.1	7–8	17.17	79.49	15	14.3
2. Marett's Cleveland-7	933.0	36.0	335.9	15–16	17.47	67.64	19	....
3. Wilson Cleveland	1190.3	34.0	404.7	7–8	17.17	81.27	14	9
4. Cleveland-54	1188.1	34.5	409.9	29–32	17.32	82.67	13	....
5. Half & Half	660.5	43.2	285.3	13–16	16.67	53.19	21	21.0
6. Dixie Triumph	1534.7	34.1	523.3	15–16	17.47	106.59	1	3.6
7. Mebane Triumph	928.7	37.7	350.1	1	18.17	72.29	18	18.6
8. Rowden-40	1386.5	33.1	458.9	1	18.17	97.30	4	*5.5
9. Acala-37	1148.9	35.9	412.5	1	18.17	86.00	10	†11.6
10. D. & P. L. No. 4	1238.2	34.6	428.4	1	18.17	89.99	7	8.
11. D. & P. L. No. 4–8	1201.2	38.4	461.3	1	18.17	94.92	5	5.
12. Stoneville No. 2	1225.2	33.7	412.9	1 1-16	18.92	90.30	6	3.3
13. Delfos-911	1181.6	31.6	373.4	1 5-32	20.04	86.95	8	14.6
14. Delfos-6102-A2C3	1161.9	31.9	370.6	1 1-8	19.42	83.84	11	13.6
15. Missdel No. 2	1081.3	33.5	362.2	1 5-32	20.04	83.37	12	13.3
16. Missdel No. 1	946.1	33.3	315.1	1 5-32	20.04	72.61	17	*15.5
17. Delfos No. 2	1199.0	31.8	381.3	1 1-8	19.42	86.31	9	6.0
18. Express-317	1369.0	33.5	458.6	1 5-32	20.04	105.56	2	2.6
19. D. & P. L. No. 6	1288.4	33.5	431.6	1 3-16	20.67	102.06	3	3.0
20. Wilds No. 2	939.6	31.0	291.3	1 7-32	21.67	72.85	16	*19.5
21. Deltatype No. 8	717.2	31.3	224.5	1 7-32	21.67	56.04	20	13.3

* Two year average. † A different strain of Acala was used in 1927 and 1928.

TABLE IV

COTTON VARIETY TEST

Bluff Land, Baton Rouge, 1929

Variety	No. of Stalks in 4 Plats	No. of Bolls per Pound	Comparative Rate of Blooming	% Rotten Bolls	% Wilty Stalks	Size of Plant	Foliage
Wann. Cleveland	595	78.0	911	7.2	0.5	Medium	Heavy
Marett's Cleveland-7	615	82.4	1104	11.3	2.2	Medium	Heavy
Wilson Cleveland	699	75.1	1081	7.4	0.0	Medium	Medium
Cleveland-54	616	77.8	1057	5.9	...	Medium	Heavy
Half & Half	596	76.7	902	12.7	51.4	Medium	Medium
Dixie-Triumph	646	75.3	1129	5.3	0.0	Large	Medium
Mebane Triumph	559	54.4	681	12.9	21.9	Medium	Heavy
Rowden 40	600	60.5	880	7.6	0.0	Large	Heavy
Acala-37	612	76.1	1000	10.6	...	Large	Heavy
D. & P. L. No. 4	602	76.4	1021	10.8	4.3	Medium	Heavy
D. & P. L. No. 4-8	610	76.3	1103	9.0	5.3	Medium	Heavy
Stoneville No. 2	655	71.6	1124	6.2	2.6	Small	Light
Delfos 6102-911	644	86.1	1403	11.8	...	Small	Light
Delfos 6102-A2C3	600	88.3	1420	10.4	21.3	Small	Light
Missdel No. 2	622	89.6	1598	13.8	22.8	Small	Light
Missdel No. 1	520	66.1	1038	9.9	12.5	Small	Medium
Delfos No. 2	620	81.0	1058	8.0	...	Medium	Light
Express-317	638	80.4	1177	6.6	1.0	Large	Light
D. & P. L. No. 6	699	85.5	1041	7.3	0.5	Large	Light
Wilds No. 2	626	76.4	989	15.9	11.3	Small	Heavy
Deltatype 8	575	61.4	1071	22.4	16.7	Small	Heavy

COTTON VARIETY STUDIES ON BLUFF LAND, BATON ROUGE, 1929

The Bluff Land cotton variety test in 1929, (see Table III), was conducted on the same land as used the two years previously. This land has been built up with legumes and fertilizers during the past few years so that it produces a moderately heavy growth of cotton plants. Fertilization consisted of 300 pounds of superphosphate, 50 pounds of nitrate of soda, and 50 pounds of sulphate of potash applied to the row several days ahead of planting and 150 pounds of nitrate of soda, in addition, applied as a side dressing after the cotton was chopped out.

The cotton was planted April 18. The weather during the entire month of April was very seasonable. As a result, a splendid stand was obtained. The seed germinated quickly and young plants grew off well. There was no serious loss of plants due to damping off diseases like there frequently is. The weather continued very seasonable until July when daily showers became common. These made weevil control difficult.

There was a heavy initial infestation of boll weevils but they were controlled rather successfully by presquare poisoning. Four

other applications of poison were made during July. This controlled the weevils fairly well during July but when the seasonal migration occurred the first part of August weevils did considerable damage, especially to small bolls. Plant lice became rather plentiful during the latter part of July. One application of nicotine sulphate in calcium arsenate was made without much effect apparently. This treatment is effective, however, under favorable conditions.

Cotton wilt damaged considerably such susceptible varieties as Half and Half, certain strains of Delfos, Mebane Triumph, Wilds and Deltatype Webber. Boll counts indicated that these same varieties also had a higher percentage of boll rot.

The rank of varieties shown in the table is very similar to results obtained during the two previous years. A variety that has a high average rank for the three years must be a good variety for local planting, or for planting anywhere where similar conditions prevail.

The lint prices used in Table III, and in other tables, are based on the New Orleans spot cotton market for November 29, white cotton, middling grade. Cotton seed was valued at $30.00 a ton.

TABLE V
SECOND VARIETY TEST
Bluff Land, Baton Rouge, 1929

Row No.	Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per Pound	Value of Seed & Lint	Rank in Value 1929	Bolls per Pound
1	Wann. Cleveland	1016	36.7	372	7-8	17.17	73.53	19	73
2	Piedmont Cleveland	1280	34.7	444	15-16	17.47	90.10	11	65
3	Rhynes Cook	1099	36.0	395	7-8	17.17	78.38	17	73
4	Cook 1010-519 S.P.S.C.	1064	40.1	426	7-8	17.17	82.71	14	75
5	Stoneville No. 1-690	1116	36.5	407	1 1-32	18.67	86.61	13	62
6	Stoneville No. 1	1073	34.2	366	1 1-16	18.92	79.84	16	65
7	Lankart	857	37.7	323	1 1-16	18.92	69.12	20	53
8	Wacona	970	34.6	336	1 3-32	19.27	74.25	18	57
9	Salsbury-68	1260	33.7	425	1 1-16	18.92	92.93	7	77
10	Coker's Clev. 5-2	1086	35.2	382	1	18.17	79.96	15	76
11	Wann. Staple Clev.	1188	35.9	426	1 1-32	18.67	90.96	10	71
12	Delfos-6102-A2C3	1219	33.8	412	1 1-8	19.42	92.11	8	87
13	Delfos-6102-2323	1240	33.3	413	1 3-16	20.67	97.76	4	81
14	Delfos-6102-654	1397	33.3	465	1 1-8	19.42	104.28	2	77
15	Delfos-6102-625	1258	33.8	425	1 3-32	19.27	94.38	6	82
16	Delfos-6102-675	1293	34.3	443	1 3-32	19.27	98.11	3	83
17	Delfos-6102-668	1434	32.7	469	1 1-8	19.42	105.54	1	77
18	Delfos-6102-2103	1192	33.9	404	1 3-16	20.67	95.32	5	81
19	Delfos-631-463	1197	34.2	409	1 1-8	19.42	91.24	9	79
20	Lightning Express-7	1192	32.6	389	1 1-8	19.42	87.58	12	81
21	Greer Witchita	924	30.0	277	1 3-16	20.67	66.95	21	62

This test was planted near the same time that the test reported in Table III was planted and conditions under which the cotton was grown were very similar.

TABLE VI

COTTON VARIETY TEST

Alluvial Land, Baton Rouge, La., 1929

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929	3 yr. Av. in Rank
1. Wann. Cleveland	1107.4	36.6	405	15-16	17.47	81.29	20	13.6
2. Marett's Cleveland-7	1144.5	36.0	412	1	18.17	85.85	17	....
3. Wilson Cleveland	1619.7	34.0	551	15-16	17.47	112.29	5	*7.0
4. Cleveland-54	1462.8	34.5	505	15-16	17.47	102.59	11	*11.5
5. Half & Half	1358.1	43.2	587	7-8	17.17	112.35	4	10.0
6. Dixie Triumph	1672.1	34.1	570	15-16	17.47	116.11	1	7.3
7. Mebane Triumph	1146.7	37.7	432	1 1-32	18.67	91.37	14	19.6
8. Rowden-40	1558.7	33.1	516	1	18.17	109.40	8	....
9. Acala-37	1118.3	35.9	401	1	18.17	83.62	18	†22.0
10. D. & P. L. No. 4	1105.3	34.6	382	1	18.17	80.26	22	17.6
11. D. & P. L. No. 4-8	1037.7	38.4	398	1	18.17	81.91	19	16.0
12. Stoneville No. 2	1190.3	33.7	401	1 1-16	18.92	87.71	16	6.6
13. Stoneville No. 1	1480.2	33.9	502	1	18.17	103.61	10	6.6
14. Lone Star Express-42	1510.7	32.5	491	1 1-16	18.92	103.99	9	*13.0
15. Delfos 6102-625	1403.9	31.2	438	1 3-32	19.27	94.42	13	..
16. Delfos 6102-A2C3	1536.9	31.9	490	1 5-32	20.04	112.87	2	5.3
17. Missdel No. 2	1449.7	33.5	486	1 5-32	20.04	112.69	3	....
18. Missdel No. 1	1421.4	33.3	473	1 3-16	20.67	112.26	6	....
19. Delfos No. 2	1554.3	31.8	494	1 1-8	19.42	111.64	7	*4.0
20. Express-317	1242.6	33.5	416	1 3-16	20.67	100.44	12	8.5
21. D. & P. L. No. 6	1111.8	33.5	372	1 3-16	20.67	91.12	15	9.0
22. Wilds No. 2	967.9	31.0	300	1 7-32	21.67	80.91	21	*22.0

* Two year average. † A different strain was used in 1927 and 1928.

ALLUVIAL LAND COTTON VARIETY STUDIES
BATON ROUGE, LA., 1929

The Alluvial Land cotton variety test was conducted on rather low river land which is classed as Sharkey clay loam. The land was only moderately fertile. It was in cotton the two years previously. No fertilizer was used either year.

The season during 1929 was very favorable for cotton except that during July and part of August afternoon showers were so frequent that it was a difficult matter to control boll weevils.

The cotton was planted April 12, and as nearly perfect a stand obtained as could be hoped for. The plants made good growth but did not become rank. They fruited well.

Boll weevils were present in numbers before the squares were large enough to puncture. A pre-square poisoning apparently did considerable good but weevils kept coming in such numbers that it was necessary to continue poisoning throughout July. Six heavy applications of calcium arsenate were made. This did not control the weevils thoroughly but it kept them from making rapid increase in number. A good crop was made in spite of the weevils.

There was but very little damage from fungus diseases such as wilt and boll rot.

As was mentioned above, the yields in the 1929 test were very good, many of the better varieties making about a bale to the acre. Varieties of the Delfos type again ranked high and made the best showing on a three year average. There seems to be no question but that they are best for alluvial land in Louisiana where cotton tends to grow too rank, and where weevils and summer rains are both abundant.

TABLE VII

COOPERATIVE COTTON VARIETY TEST

at Raceland, Lafourche Parish, 1929

Ridgeland Co., Plantation Owners; V. A. Guidroz, County Agent and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929
1. Wann. Cleveland	387.2	36.6	142	15–16	17.47	28.49	19
2. Wilson Cleveland	471.9	36.0	170	15–16	17.47	34.23	15
3. Half & Half	447.7	43.2	193	7–8	17.17	36.97	12
4. Dixie-Triumph	612.3	34.1	209	15–16	17.47	42.56	10
5. Mebane Triumph	261.4	37.7	99	1 1-32	18.67	20.91	20
6. Rowden-40	508 2	33.1	168	1	18.17	35.63	14
7. Acala-37	447.7	35.9	161	1	18.17	33.56	16
8. D. & P. L. No. 4	450.1	34.6	156	1	18.17	32.76	17
9. D. & P. L. No. 4-8	467.1	38.4	179	1	18.17	36.84	13
10. Stoneville No. 2	660.7	33.7	223	1 1-16	18.92	48.76	8
11. Stoneville No. 1	534.8	33.9	181	1	18.17	38.20	11
12. Lone Star X Express-42	769.6	32.5	250	1 1-16	18.92	55.10	5
13. Delfos -911	648.6	31.6	205	1 5-32	20.04	47.74	9
14. Delfos-6102-A2C3	822.8	31.9	262	1 5-32	20.04	60.91	2
15. Missdel No. 2	701.8	33.5	235	1 5-32	20.04	54.10	6
16. Missdel No. 1	660.7	33.3	220	1 3-16	20.67	52.09	7
17. Delfos No. 2	912.3	31.8	290	1 1-8	19.42	65.65	1
18. Express-317	762.3	33.5	255	1 3-16	20.67	60.31	3
19. D. & P. L. No. 6	721.2	33.5	242	1 3-16	20.67	57.21	4
20. Wilds No. 2	399.3	31.0	124	1 7-32	21.67	31.00	18

COTTON VARIETY STUDIES AT RACELAND, LAFOURCHE PARISH, 1929

The Raceland cotton variety test was conducted on land belonging to the Ridgeland Company, located about 5 miles southwest of Raceland. The soil is classed as Sharkey clay and is rather low and fertile, but the particular plats used were not very uniform.

The cotton was planted May 7, and a splendid stand secured. Boll weevils did not appear until rather late but did considerable damage because the cotton was late. No poison was used.

The yields shown in Table VII on another page are only fair. With earlier planting and weevil control they doubtless would have

been much better. The leading varieties, considering the value of their product, are nearly all of the Delfos type. The indications are that this is the best variety to plant in this section. It is prolific and quick-making, has a light foliage and the plants do not become as rank as the plants of some other varieties.

TABLE VIII

COOPERATIVE COTTON VARIETY TEST

Crowley, La., 1929

J. M. Jenkins, Superintendent Rice Experiment Station and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929	Average Rank for 2 years
1. Wann. Cleveland....	602	36.6	220	15–16	17.47	44.16	7	12.5
2. Marett's Cleveland-7	560	36.0	202	1	18.17	42.07	11	....
3. Wilson Cleveland...	714	34.0	243	15–16	17.47	49.52	3	6.0
4. Cleveland 54.....	612	34.5	211	15–16	17.47	42.88	9	....
5. Half & Half.....	532	43.2	230	7–8	17.17	44.02	8	11.5
6. Dixie Triumph.....	668	34.1	228	15–16	17.47	46.43	6	9.0
7. Mebane Triumph...	490	37.7	185	1 1-32	18.67	39.12	17	16.5
8. Rowden-40.....	542	33.1	179	1	18.17	37.97	20	20.0
9. Acala-37.....	553	35.9	199	1	18.17	41.47	15	....
10. D. & P. L. No. 4....	570	34.6	197	1	18.17	41.39	14	8.0
11. D. & P. L. No. 4-8..	637	38.4	245	1	18.17	50.40	2	5.0
12. Stoneville No. 2.....	665	33.7	224	1 1-16	18.92	49.00	4	5.0
13. Delfos-911.....	581	31.6	184	1 5-32	20.04	42.83	10	....
14. Delfos-6102-A2C3...	626	31.9	200	1 5-32	20.04	46.47	5	3.0
15. Missdel No. 2.....	539	33.5	181	1 5-32	20.04	41.64	12	....
16. Missdel No. 1.....	507	33.3	169	1 3-16	20.67	40.00	16	....
17. Delfos No. 2.....	577	31.8	183	1 1-8	19.42	41.45	13	....
18. Express-317.....	651	33.5	218	1 3-16	20.67	51.56	1	10.0
19. D. & P. L. No. 6....	486	33.5	163	1 3-16	20.67	38.54	19	12.0
20. Wilds No. 2.....	500	31.0	155	1 7-32	21.67	38.77	18	....

COTTON VARIETY STUDIES AT CROWLEY, LA., 1929

The Crowley cotton variety test was conducted in cooperation with J. M. Jenkins, Superintendent of the Rice Experiment Station, on rented land adjoining the Experiment Station. This land is prairie loam soil, known as Crowley Silt Loam. The particular piece used is old rice land typical of the greater portion of the soil in the Crowley area, and considered rather low in plant food available for highland crops. Fertilization: 474 pounds per acre of a complete fertilizer consisting of 300 pounds super-phosphate, 150 pounds nitrate of soda, and 24 pounds sulphate of potash was applied before planting.

The cotton was planted April 16, and germinated about two weeks later. Stands were only fair. Boll weevils appeared early and did considerable damage although the cotton was given six

applications of calcium arsenate poison. The plants attained a moderate size but were not fruited very well.

The fact that there has been considerable difference in the performance of varieties the two years grown, and some difference in their showing here and elsewhere when grown under similar conditions, may be taken as an indication that it will be necessary to conduct the experiment for a longer period of years before a very definite opinion can be formed concerning the merits of the different varieties for this type of land. Delfos-6102-A2C3, D. & P. L. No. 4 - 8, Stoneville No. 2, and Wilson Cleveland have the best average record and are probably among the most satisfactory varieties obtainable. Express-317, which ranked first in 1929, is a prolific, vigorous-growing variety with good lint characters. It did well in many tests in 1929 and looks as if it might be well adapted to the Crowley lands.

TABLE IX

COOPERATIVE COTTON VARIETY TEST

at DeRidder, Beauregard Parish, 1929.

I. R. Smith, Plantation Owner; M. L. Cooper, County Agent and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929
1. Wann. Cleveland	373.4	36.6	136.7	7–8	17.17	27.02	18
2. Marett's Cleveland-7	290.4	36.0	104.5	1	18.17	21.79	20
3. Wilson Cleveland	484.1	34.0	164.6	7–8	17.17	33.05	8
4. Cleveland-54	373.4	34.5	128.8	7–8	17.17	25.78	19
5. Half & Half	366.5	43.2	158.3	13–16	16.67	29.51	16
6. Dixie Triumph	511.7	34.1	174.5	15–16	17.47	35.55	5
7. Mebane Triumph	408.0	37.7	153.8	31–32	17.82	31.22	12
8. Rowden 40	567.0	33.1	187.7	1	18.17	39 80	1
9. Acala-37	414.9	35.9	148.9	1 1-16	18.92	32.16	10
10. D. & P L No. 4	442.5	34.6	153.1	15–16	17.47	31.09	13
11. D. & P. L. No. 4-8	380.3	38.4	146.0	1	18.17	30.05	15
12. Stoneville No. 2	421.8	33.7	142.1	1 3-32	19.27	31.58	11
13. Delfos-911	435.6	31.6	137.6	1 3-16	20.67	32.91	9
14. Delfos-6102-A2C3	463.3	31.9	147.8	1 5-32	20.04	34.35	6
15. Missdel No. 2	456.3	33.5	152.9	1 1-8	19.42	34.24	7
16. Missdel No. 1	394.1	33.3	131.2	1 3-16	20.67	31.06	14
17. Delfos No. 2	504.7	31.8	160.5	1 5-32	20.04	37.32	2
18. Express-317	470.2	33.5	157.5	1 5-32	20.04	36.25	3
19. D. & P. L. No. 6	366.4	33.5	122.7	1 3-16	20.67	29.02	17
20. Wilds No. 2	449.4	31.0	139.3	1 1-4	22.67	36.23	4
21. *Egyptian Red Leaf	318.1						

* None of this variety ginned for lint sample.

COTTON VARIETY TEST AT DE RIDDER, 1929

The DeRidder cotton variety test was conducted on the farm of I. R. Smith, located ten miles west of DeRidder in Beauregard Parish. The land used is classed as Susquehannah fine sandy loam. It is ridge land, better drained than most of the land of that part

of the State and probably more fertile naturally. Most of the ridge land is in cultivation while much of the other is lying out.

The cotton in the variety test was fertilized with a side dressing of commercial fertilizers, but, under the dry weather conditions prevailing, it was applied too late to be of much help. The cotton plants did not get to be large enough to bear much cotton.

The cotton was planted April 12, and came up to a good stand. On account of dry weather during the season there was but very little damage from boll weevils, other cotton insects, or from fungus diseases.

The yields shown in the table are low. They would doubtless have been much better under more favorable weather conditions and heavier or more effective fertilization.

It will be necessary to conduct the experiment for a longer period before a very definite opinion can be formed concerning the merits of the different varieties for this type of land. Apparently, though, a vigorous growing, prolific cotton is needed.

TABLE X

COOPERATIVE COTTON VARIETY TEST

Melrose, Natchitoches Parish, 1929

John Henry, Plantation Owner; Guy Fletcher, County Agent and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value
1. Wann. Cleveland	717.5	36.6	263	7-8	17.17	51.97	18
2. Marett's Cleveland-7	833.7	36.0	300	1	18.17	62.52	12
3. Wilson Cleveland	1132.5	34.0	385	7-8	17.17	77.32	4
4. Cleveland-54	862.7	34.5	298	7-8	17.17	59.58	13
5. Half & Half	720.0	43.2	311	13-16	16.67	57.97	16
6. Dixie Triumph	1086.6	34.1	371	15-16	17.47	75.55	7
7. Mebane Triumph	338.8	37.7	128	1	18.17	26.42	20
8. Rowden-40	848.2	33.1	281	1	18.17	59.57	14
9. Acala-37	775.6	35.9	278	1	18.17	57.98	15
10. D. & P. L. No. 4	774.4	34.6	268	1	18.17	56.29	17
11. D. & P. L. No. 4-8	988.6	38.4	380	15-16	17.47	75.52	8
12. Stoneville No. 2	971.6	33.7	327	1 1-16	18.92	71.54	10
13. Delfos-911	1032.1	31.6	326	1 5-32	20.04	75.92	6
14. Delfos-6102-A2C3	1062.4	31.9	339	1 1-8	19.42	76.68	5
15. Missdel No. 2	1165.2	33.5	390	1 1-8	19.42	87.37	2
16. Missdel No. 1	976.5	33.3	325	1 5-32	20.04	74.90	9
17. Delfos No. 2	1183.4	31.8	376	1 1-8	19.42	85.13	3
18. Express-317	1198.0	33.5	401	1 5-32	20.04	92.32	1
19. D. & P. L. No. 6	854.3	33.5	286	1 5-32	20.04	65.84	11
20. Wilds No. 2	526.4	31.0	163	1 3-16	20.67	39.14	19

COTTON VARIETY STUDIES AT MELROSE, 1929

The Melrose cotton variety tests were conducted on the J. H. Henry plantation, which is located on Cane River about 18 miles southeast of Natchitoches. The land used was rather fertile sandy loam soil. Plants made medium rank growth. The cotton was planted April 26, and came up to a fair stand. The weather was

seasonable except that showers during the time cotton was fruiting caused some shedding and interfered with weevil control. The cotton was damaged considerably by weevils although five applications of calcium arsenate were made. Probably most of this was applied too early for most efficient results. Wilt damaged Half and Half, some strains of Delfos, Wilds and other of the more susceptible varieties.

Yields, lint percentages, staple length, etc., are shown in the Table X. The yields are not high but the performances of the different varieties seems to be rather consistent. The ones that made the best showing are about the same as the ranking varieties in other tests where conditions were similar. From the test it appears that Express-317, Missdel No. 2, Delfos No. 2, Delfos 6102-A_2C_3, and Wilson Cleveland are the most profitable varieties to plant in this section. Another season's test might show a slightly different ranking but most of these varieties would rank high if conditions were similar to the ones prevailing the past season. D. & P. L. No. 8 is a good short staple variety and Dixie-Triumph is a splendid variety for wilty soil.

TABLE XI

COTTON VARIETY TEST

Natchitoches, La., 1929

Louisiana State Normal and State Experiment Station Cooperating

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value
1. Wann. Cleveland	1536	36.6	562	7–8	17.17	111.11	14
2. Marett's Cleveland	1568	36.0	564	1	18.17	117.54	10
3. Wilson Cleveland	1984	34.0	675	7–8	17.17	135.53	1
4. Gleveland No. 54	1584	34.5	546	7–8	17.17	109.32	15
5. Cleveland Big Boll*	1184						
6. Half & Half	1584	43.2	684	13–16	16.67	127.52	8
7. Dixie Triumph	1872	34.1	638	15–16	17.47	129.97	5
8. Mebane Triumph	976	37.7	368	1	18.17	75.99	21
9. Rowden-40	1632	33.1	540	1	18.17	114.50	13
10. Acala-37	1328	35.9	477	1	18.17	99.43	18
11. D. & P. L. No. 4	1616	34.6	559	1	18.17	117.42	11
12. D. & P. L. No. 4-8	1696	38.4	651	15–16	17.47	129.40	7
13. Stoneville No. 2	1760	33.7	593	1 1-16	18.92	129.70	6
14. Delfos-911	1776	31.6	561	1 5-32	20.04	130.64	4
15. Delfos-6102-A2C3	1856	31.9	592	1 1-8	19.42	133.93	2
16. Missdel No. 2	1376	33.5	461	1 1-8	19.42	103.25	16
17. Missdel No. 1	1328	33.3	442	1 5-32	20.04	101.87	17
18. Delfos No. 2	1600	31.8	509	1 1-8	19.42	115.21	12
19. Express-317	1616	33.5	541	1 5-32	20.04	124.54	9
20. D. & P. L. No. 6	1696	33.5	568	1 5-32	20.04	130.75	3
21. Wild's No. 2	1040	31.0	322	1 3-16	20.67	77.33	20
22. Greer-Wichita	1232	30.8	379	1 5-32	20.04	88.74	19

*None of this variety ginned for lint per cent.

COTTON VARIETY STUDIES AT NATCHITOCHES, 1929

The cotton variety test at Natchitoches, which was under the supervision of Professor A. A. Fredericks, was conducted on land belonging to the State Normal College and located in the Cane River bottoms near the city. The land used was rather fertile due to legumes that had been grown previously. It will be observed that the yields shown in the accompanying table are unusually good. It will be noted, too, that the comparative ranking of the varieties grown is very similar to the ranking in the tests at Dixie and at Melrose, two other tests made in the Red River valley.

TABLE XII

COOPERATIVE COTTON VARIETY TEST

at Dixie, Caddo Parish, 1929.

W. H. North, Plantation Owner; J. B. Anthony, County Agent and Louisiana Experiment Station Cooperating.

Varieties	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed and Lint	Rank in Value 1929	3 yr. Average in Rank
1. Wann. Cleveland....	957.1	36.6	350.3	7–8	17.17	69.25	12	10.3
2. Marett's Cleveland-7	856.6	36.0	308.4	1	18.17	64.26	16	....
3. Wilson Cleveland...	1306.8	34.0	444.3	7–8	17.17	89.22	1	2.6
4. Half & Half.....	866.4	43.2	374.3	13–16	16.67	69.78	11	11.3
5. Dixie-Triumph.....	1204.0	34.1	410.6	15–16	17.47	83.63	6	5.3
6. Mebane Triumph...	451.3	37.7	170.1	1	18.17	35.13	21	20.6
7. Lankart.....	496.1	37.9	188.0	1 1-16	18.92	40.19	20	....
8. Wacona.....	781.7	33.0	258.0	13-32	19.27	57.57	19	....
9. Rowden-40.....	977.7	33.1	323.6	1	18.17	68.61	13	*7.0
10. Acala-37.....	1007.9	35.9	361.8	1	18.17	75.43	10	†15.0
11. D. & P. L. No. 4....	926.9	34.6	320.7	1	18.17	67.36	15	9.6
12. D. & P. L. No. 4-8..	1000.7	38.4	384.3	1	18.17	79.07	8	4.6
13. Stoneville No. 2.....	1136.2	33.7	382.9	1 1-16	18.92	83.74	5	*6.0
14. Delfos-6102-A2C3...	1211.2	31.9	386.4	1 1-8	19.42	87.41	2	11.0
15. Missdel No. 2.....	1006.7	33.5	337.2	1 1-8	19.42	75.53	9	....
16. Missdel No. 1.....	826.4	33.3	275.2	1 5-32	20.04	63.42	17	....
17. Delfos No. 2.....	1168.9	31.8	371.7	1 1-8	19.42	84.14	4	7.3
18. Express-317.....	1119.2	33.5	374.9	1 5-32	20.04	86.29	3	*4.5
19. Delfos 631-463.....	1109.6	32.2	357 3	1 1-8	19.42	80.67	7	....
20. Wilds No. 2.....	916.0	31.0	284.0	1 3-16	20.67	68.18	14	....
21. Greer Witchita.....	860.3	30.8	265.0	1 5-32	20.04	62.04	18	....

* Two year average.

† A different strain of Acala was used in 1927 and 1929.

COTTON VARIETY STUDIES AT DIXIE, 1929

The Dixie cotton variety studies were made on the plantation belonging to W. H. North, located in the Red River valley, about fifteen miles north of Shreveport. The land used was of the lighter sandy type of valley soil and was moderately fertile. The weather

during the cotton growing period was fairly seasonable. Plants became rather rank, due probably to a large supply of nitrogen in the soil.

Cotton was planted April 29 and a good stand secured. Boll weevils appeared in some numbers during July. Late in the month, three applications of poison were made with an airplane. There was considerable wilt in some of the more susceptible varieties like Half & Half.

The yields, it will be noticed in the accompanying table, were fairly good but below the yields of the previous year. Wilson Cleveland (Collins' Cleveland) again ranked high in the test and appears to be well adapted to the region. Express-317, Delfos No. 2, and Stoneville No. 2 all ranked well and have a good average for the two or three years that they have been grown. They are prolific and possess some wilt resistance, which makes them better suited to this land than several other varieties listed. Delfos-6102-A_2C_3 ranked high in 1929, but its average for the three years is not so good. It is too susceptible to wilt to be adapted to this soil.

TABLE XIII

COOPERATIVE COTTON VARIETY TEST

at Homer, Claiborne Parish, 1929.

Atkins Bailey, Plantation Owner; Brodie Pugh, County Agent and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Valeu 1929
1. Wann. Cleveland	766.2	36.6	280.4	7–8	17.17	55.53	14
2. Marett's Cleveland-7	645.2	36.0	232.3	1	18.17	48.40	18
3. Wilson Cleveland	832.3	34.0	283.0	7–8	17.17	56.83	11
4. Half & Half	717.8	43.2	310.1	13–16	16.67	57.81	10
5. Super Seven	722.6	32.0	231.2	1 1-16	18.92	51.11	16
6. Dixie Triumph	838.8	34.1	286.0	15–16	17.47	58.25	8
7. Mebane Triumph	480.7	37.7	181.2	31–32	17.82	36.78	20
8. Rowden-40	806.5	33.1	267.0	1	18.17	56.60	12
9. Acala-37	750.0	35.9	269.2	1 1-16	18.92	58.14	9
10. D. & P. L. No. 4	685.5	34.6	237.2	15–16	17.47	48.17	19
11. D. & P. L. No. 4-8	795.2	38.4	305.4	1	18.17	62.84	2
12. Cleveland No. 5	754 9	36.2	273.3	1 1-8	19.42	60.29	6
13. Stoneville No. 2	742.0	33.7	250.1	1 3-32	19.27	55.57	13
14. Delfos-6102-A2C3	835.5	31.9	266.5	1 5-32	20.04	61.95	5
15. Missdel No. 2	801.7	33.5	268.6	1 1-8	19.42	60.16	7
16. Missdel No. 1	796.8	33.3	265.3	1 3-16	20.67	62.81	3
17. Delfos No. 2	838.8	31.8	266.7	1 5-32	20.04	62.03	4
18. Express-317	908.1	33.5	304.2	1 5-32	20.04	70.02	1
19. D. & P. L. No. 6	653.3	33.5	218.9	1 3-16	20.67	51.77	15
20. Wilds No. 2	621.0	31.0	192.5	1 1-4	22.67	50.07	17

COTTON VARIETY STUDIES AT HOMER, 1929

The Homer cotton variety test was conducted on the farm of Atkins Bailey, located in Claiborne Parish, five miles south of Homer. The land used is classed as Ruston fine sandy loam and is rather low in fertility, naturally. This land, in its natural state, is fairly typical of a large part of the hill land of North Louisiana but Mr. Bailey grows legumes and cover crops and keeps his land well terraced so that its condition is better than average land of the section. Preceding this cotton crop there was a good cover crop of rye turned under later in the season, and 350 pounds of a 9-6-3 fertilizer applied.

Unseasonably dry weather prevailed during most of the season. This prevented cotton plants from becoming large, and interfered with their fruiting.

The cotton was planted May 14 and 15. This was rather late but the seed germinated at once and cotton came up to a good stand. The young plants grew off well.

Boll weevils appeared during July but did not become numerous enough to merit poisoning. Fungus diseases caused practically no loss.

The accompanying table gives the most important features in connection with each variety used in the test. It will be observed that the yields are only fair. This was due, in part at least, to the dry weather experienced. Four of the five ranking varieties were long staple varieties. These varieties not only ranked high in value, which was increased to some extent by the premium placed on staple cottons, but they ranked high in production of lint, due to their earliness and prolificness. In general this section of the State is better adapted to growing short staple varieties. D. & P. L. No. 8 appears to be a very satisfactory variety. If the land is badly infected with wilt, Dixie-Triumph is a good variety to plant.

TABLE XIV

COOPERATIVE COTTON VARIETY TEST

at Calhoun, La., 1929.

Sidney Stewart, Superintendent North Louisiana Experiment Station and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value	3 Yr. Average in Rank
1. Wann. Cleveland....	1460	36.6	534	7-8	17.17	105.57	19	21
2. Marett's Cleveland-7	1460	36.0	526	1	18.17	109.58	18	..
3. Wilson Cleveland...	1874	34.0	637	7-8	17.17	127.93	6	14
4. Cleveland-54.....	1640	34.5	566	7-8	17.17	113.29	15	..
5. Half & Half.....	1550	43.2	670	13-16	16.67	124.88	10	16
6. Dixie-Triumph.....	1764	34.1	602	15-16	17.47	122.59	11	12
7. Mebane Triumph...	1190	37.7	449	31-32	17.82	91.13	21	23
8. Rowden-40.....	1660	33.1	549	1	18.17	116.42	14	*11
9. Acala-37.....	1530	35.9	549	1 1-16	18.92	118.59	13	13
10. D. & P. L. No. 4....	1600	34.6	554	15-16	17.47	112.47	16	11
11. D. & P. L. No. 4-8..	1760	38.4	676	1	18.17	139.08	2	5
12. Stoneville No. 2.....	1740	33.7	586	1 3-32	19.27	130.38	4	*7
13. Delfos-911.....	1824	31.6	576	1 3-16	20.67	137.77	3	7
14. Delfos-910.....	1690	32.0	541	1 5-32	20.04	126.08	8	*14
15. Delfos-6102-A2C3...	1634	31.9	521	1 5 32	20.04	121.11	12	7
16. Missdel No. 2.....	1680	33.5	563	1 -1-8	19.42	126.09	7	4
17. Missdel No. 1.....	1404	33.3	468	1 3-16	20.67	110.78	17	..
18. Delfos No. 2.....	1954	31.8	621	1 5-32	20.04	144.45	1	..
19. Express-317.....	1624	33.5	544	1 5-32	20.04	125.22	9	*5
20. D. & P. L. No. 6....	1640	33.5	549	1 3-16	20.67	129.85	5	6
21. Wilds No. 2..... ..	1300	31.0	403	1 1-4	22.67	104.82	20	..

* Two year average.

COOPERATIVE COTTON VARIETY TEST AT CALHOUN, 1929

The Calhoun cotton variety test was conducted on the North Louisiana Experiment Station farm on land fairly typical of the region except that the area used was nearly level and more fertile than average land in North Louisiana. The plats were treated with a moderate application of a complete fertilizer before planting. The stands secured were good but there was some difference in number of plants per row for different varieties. There was practically no wilt or boll rot, and little weevil injury, due to the fact that the cotton was poisoned for protection.

It will be noted in the accompanying table that the yield of most varieties was good, especially for the section of the State where the test was made. With sufficient fertilizers, good culture, and a good variety, a satisfactory crop can be made.

The results obtained at the Calhoun Station the past three years show high rank for certain staple varieties. It is probable, though, that on the poorer lands of the section that a more vigorous growing short staple cotton will be the most profitable. Delfos No. 2 and Express-317 are among the most vigorous growing of the staple

varieties. Dixie-Triumph is a good variety to grow on land where cotton rusts and wilts badly. D. & P. L. No. 4-8 is a good hill land variety. It has a good length for a short cotton, has a good lint percentage, and is fairly disease resistant and productive.

TABLE XV

COOPERATIVE COTTON VARIETY TEST

Monroe, Ouachita Parish, 1929.

N. W. McHenry, Plantation Owner; E. R. Strahan, County Agent and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929	Average Rank for 3 years
1. Wann. Cleveland....	1001.9	36.6	367	7–8	17.17	72.54	14	14.6
2. Wilson Cleveland...	1282.6	34.0	436	7–8	17.17	87.56	7	5.3
3. Cleveland-54.....	1264.5	34.5	436	7–8	17.17	87.29	8	..
4. Half & Half.....	695.8	43.2	301	13–16	16.67	56.10	18	19.3
5. Dixie-Triumph.....	1312.9	34.1	448	15–16	17.47	91.24	5	6.0
6. Dixie-14.....	1355.2	36.0	488	15–16	17.47	98.26	2	3.3
7. Mebane Triumph...	701.8	37.7	265	1	18.17	54.70	20	16.0
8. Lankart.....	813.1	37.9	308	1 1-16	18.92	65.85	16	..
9. Rowden-40.....	1325.0	33.1	439	1	18.17	93.06	4	*6.5
10. Acala-37.....	959.5	35.9	344	1	18.17	71.74	15	†7.6
11. D. & P. L. No. 4....	1185.8	34.6	410	1	18.17	86.13	9	7.6
12. D. & P. L. No. 4-8..	1064.8	38.4	409	1	18.17	84.15	10	*9.0
13. Stoneville No. 2.....	1210.0	33.7	408	1 1-16	18.92	89.22	6	*8.0
14. Delfos-6102-A2C3...	792.6	31.9	253	1 1-8	19.42	57.23	17	17.0
15. Missdel No. 2.....	742.9	33.5	249	1 1-8	19.42	55.76	19	..
16. Delfos-631-463.....	1001.9	32.2	323	1 1-8	19.42	72.91	13	..
17. Missdel No. 1.....	998.3	33.3	332	1 5-32	20.04	76.53	11	..
18. Express-317.....	1470.2	33.5	493	1 5-32	20.04	113.46	1	*1.0
19. D. & P. L. No. 6....	1254.8	33.5	420	1 5-32	20.04	96.69	3	6.0
20. Wilds No. 2.....	980.1	31.0	304	1 3-16	20.67	72.98	12	11.5

* Two year average. † A different strain of Acala was used in 1927 and 1928.

COTTON VARIETY STUDIES AT MONROE, 1929

The Monroe cotton variety test in 1929 was planted on the McHenry Plantation, ten miles south of Monroe in the Ouachita valley. The land used has been in cultivation for many years but is still fairly productive. It is rather badly infected with the cotton wilt organism and cotton also rusts rather badly in parts of the cuts indicating a deficiency of potash. However, a liberal application of fertilizer was used.

The cotton varieties were planted April 24, and good stands secured. Weevils appeared the latter part of the season but did no great amount of damage. Cotton wilt caused considerable injury to Half & Half, the Delfos strains, Missdel, Mebane, Lankart, and other susceptible varieties.

The accompanying table shows yields and other data of interest to cotton growers. The yields are only fairly good, being consider-

ably lower than the previous year. It will be noted, however, that about the same varieties ranked high this year that did last. Express-317 ranked first this year while last year Express-121 was first. This is a very similar strain—both being selected from the same variety. Both have considerable wilt resistance and are rather prolific. D. & P. L. No. 6 is another very similar cotton, which ranked high and has done well on Mr. McHenry's plantation when planted in large fields. Dixie-14 and Dixie-Triumph are very similar and seem to be well adapted to land such as Mr. McHenry's. They are regular wilt resistant varieties. Rowden-40 is a selection from the Texas Rowden and differs from it in having smaller bolls and in being more prolific.

TABLE XVI

COOPERATIVE COTTON VARIETY TEST

St. Joseph, La., 1929.

C. B. Haddon, Superintendent La. Delta Experiment Station and Louisiana Experiment Station Cooperating.

Varieties	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Lint per lb.	Value of Lint & Seed	Rank in Value
1. Wann. Cleveland	1506	36.6	551	7–8	17.17	108.94	20
2. Wilson Cleveland	1737	36.0	625	7–8	17.17	123.99	11
3. Half & Half	1314	43.2	568	13–16	16.67	105.88	21
4. Dixie-Triumph	1827	34.1	623	15–16	17.47	126.90	9
5. Mebane Triumph	1430	37.7	539	1	18.17	111.31	19
6. Lankart	1499	37.9	568	1 1-16	18.92	121.44	12
7. Wacona	1633	33.0	539	1 3-32	19.27	120.28	13
8. Rowden-40	1782	33.1	590	1	18.17	125.08	10
9. Acala-37	1439	35.9	517	1	18.17	111.82	16
10. D. & P. L. No. 4	1539	34.6	532	1	18.17	111.77	17
11. D. & P. L. No. 4-8	1702	38.4	654	15–16	17.47	129.97	4
12. Stoneville No. 2	1625	33.7	548	1 1-16	18.92	119.84	14
13. Delfos-911	1791	31.6	566	1 5-32	20.04	131.81	3
14. Delfos-6102-A2C3	1788	31.9	570	1 1-8	19.42	128.96	5
15. Missdel No. 2	1702	33.5	570	1 1-8	19.42	127.67	8
16. Missdel No. 1	1676	33.3	558	1 5-32	20.04	128.59	6
17. Delfos No. 2	1864	31.8	593	1 1-8	19.42	134.23	2
18. Express-317	1780	33.5	596	1 5-32	20.04	137.20	1
19. D. & P. L. No. 6	1661	33.5	556	1 5-32	20.04	128.00	7
20. Wild's No. 2	1500	31.0	465	1 3-16	20.67	111.65	18
21. Greer Witchita	1633	30.8	503	1 5-32	20.04	117.75	15

COTTON VARIETY STUDIES AT ST. JOSEPH, LA., 1929

The St. Joseph variety studies were made on the Louisiana Delta Branch Experiment Station farm located in Tensas Parish, about three miles north of St. Joseph. The land used was delta soil of the lighter sandy loam type and rather low in fertility. It was fertilized with 75 pounds of calcium cyanamid before planting

and 100 pounds of nitrate of soda used as a side dressing after chopping out cotton. The cyanamid was bedded on.

The weather was unusually dry during the entire season, there being no rain of any consequence from planting time until the cotton was nearly mature. This retarded the growth of the plants and perhaps caused some shedding, but it was helpful in that it assisted in holding the boll weevils in check.

The cotton was planted May 3rd and 4th and chopped out May 22nd. Good stands were secured.

On June 24, a heavy infestation of cotton flea hoppers was observed. They did considerable damage apparently but later the plants outgrew the injury and put on a good crop of new forms.

During the first part of July some weevils appeared in parts of the plats. Portions were dusted on July 3rd, and again on July 9th. This appeared to prevent the spread of the weevils to other parts of the plats until the general weevil migration took place. No serious weevil injury was experienced.

Fungus diseases caused some of the young plants to die soon after coming up but this was not extensive enough to damage stands seriously. But very little wilt or other fungus diseases appeared during the season.

The accompanying table will show the most important characteristics of each variety. It will be observed that the yields are good and that the high ranking varieties are mostly varieties that are commonly grown in the region. The first eight varieties are all, except D. & P. L. No. 4-8, of a similar type and do not differ greatly in value.

Express-317 is a selection from Express-432, a variety that was grown considerably a few years ago. It is a little more vigorous in its growth than most strains of Delfos and somewhat more disease resistant. It is a new strain and seed are not available in quantity at present. Delfos No. 2 is also a new selection that shows

considerable merit, especially for some localities. It is also somewhat more vigorous and disease resistant than most strains of Delfos. Delfos-911 and Delfos-6102-A_2C_3 are standard strains of Delfos-6102. Missdel No. 1 and No. 2 are selections from Delfos-631 and Delfos-6102 respectively. They are very similar to those varieties except that they have a somewhat higher lint percentage. Most tests have shown that they are not as productive as the better strains of Delfos and have a lower total value of product. D. & P. L. No. 4-8 has a heavier foliage than the other varieties mentioned and shorter staple but is a productive and rather vigorous growing variety. It has a splendid lint percentage.

TABLE XVII

NEW STRAINS TEST

St. Joseph, La., 1929

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value 1929
1. Cleveland 54	1767	36.9	652	29–32	17.32	129.64	15
2. Marett's Clev. Big Boll New 5	1577	39.0	615	7–8	17.17	120.03	18
3. Marett's Cleveland 6B	1451	37.1	538	1 1-16	18.92	115.49	19
4. Cokers Clev. 884 Strain 2	1474	33.0	486	1 1-16	18.92	106.77	20
5. Rowden 2088	1873	36.5	684	1 1-32	18.67	145.52	8
6. Rowden 2119	1772	36.9	654	1 1-32	18.67	138.87	12
7. Rowden 3053	1741	35.7	622	1	18.17	129.81	14
8. Ewing's 4128A-21-32⁻							
9. Ewing's 5242A-310-47⁻							
10. Stoneville No. 3	1597	39.3	628	15–16	17.47	124.25	16
11. S. P. S. C. 6102x65-632	1782	36.7	654	1 5-32	20.04	147.98	6
12. Cokers Foster, Strain 4	1663	34.1	567	1 3-16	20.67	133.64	13
13. S. P. S. C. 6102-324-6207	1702	36.0	613	1 3-16	20.67	143.05	9
14. S. P. S. C. 6102-324-6106	1726	35.1	606	1 3-16	20.67	142.06	10
15. S. P. S. C. 6102-324-6100	1892	33.5	634	1 3-16	20.67	149.92	4
16. Delfos 6102-2323	1937	34.3	664	1 3-16	20.67	156.35	2
17. S. P. S. C. 6102-550	1926	35.9	691	1 5-32	20.04	157.01	1
18. Delfos 6102-625	1906	34.1	650	1 5-32	20.04	149.10	5
19. S. P. S. C. 631-633	1851	34.5	639	1 3-16	20.67	150.26	3
20. Delfos 910	1842	33.5	617	1 3-16	20.67	145.91	7
21. Express 17	1740	34.0	592	1 3-16	20.67	139.59	11
22. *Wilson's Better Staple	1536	38.0	584	1	18.17	120.39	17

This test was conducted on a cut adjoining the one on which the variety test was conducted. Conditions were very similar. The lint percentages shown in the above table are about two per cent higher than normal.

* In but one plat.

⁻ Varieties 8 and 9 were accidentally mixed in harvesting.

TABLE XVIII

COOPERATIVE COTTON VARIETY TEST

Hammond, Tangipahoa Parish, 1929

G. W. Benson, Plantation Owner; Sewell Bahm, Co. Agent; B. Szymoniak, Hammond Branch Experiment Station and Louisiana Experiment Station Cooperating.

Variety	Seed Cotton per Acre	% Lint	Lint per Acre	Length of Staple	Value of Staple per lb.	Value of Seed & Lint	Rank in Value
Wann. Cleveland	739.4	36.6	271	7–8	17.17	53.56	3
Marett's Cleveland	630.5	36.0	227	15–16	17.47	45.71	16
Wilson Cleveland	831.1	34.0	283	7–8	17.17	56.81	2
Cleveland-54	705.0	34.5	243	29-32	17.32	49.02	8
Half & Half	538.8	43.2	233	13–16	16.67	43.43	18
Dixie-Triumph	673.5	34.1	230	15–16	17.47	46.83	12
Mebane-Triumph	507.3	37.7	191	1	18.17	39.45	20
Rowden-40	753.8	33.1	250	1	18.17	52.98	4
Acala-37	599.0	35.9	215	1	18.17	44.83	17
D. & P. L. No. 4	642.0	34.6	222	1	18.17	46.64	14
D. & P. L. No. 4-8	596.1	38.4	229	1	18.17	47.12	11
Stoneville No. 2	644.9	33.7	217	1 1-16	18.92	47.47	10
Delfos-911	653.4	31.6	206	1 5-32	20.04	47.99	9
Delfos-6102-A2C3	690.7	31.9	220	1 1-8	19.42	49.78	7
Missdel No. 2	604.7	33.5	203	1 5-32	20.04	46.71	13
Missdel No. 1	567.5	33.1	188	1 5-32	20.04	43.37	19
Delfos No. 2	736.6	31.8	234	1 1-8	19.42	52.98	5
Express-317	773.8	33.5	259	1 5-32	20.04	59.63	1
D. & P. L. No. 6	664.9	33.5	223	1 3-16	20.67	52.72	6
Wilds No. 2	599.0	31.0	186	1 7-32	21.67	46.50	15

COTTON VARIETY STUDIES AT HAMMOND, 1929

The Hammond cotton variety test was conducted about two miles east of Hammond in Tangipahoa Parish. The land used is classed as Pheba fine sandy loam, but is better known, probably, as longleaf pine flats. The land in this area is flat, poorly drained, and not very fertile. These tests were made to see what cotton would do on this type of soil if given fair culture, and further, to see what varieties were best for this region.

No fertilizer was applied to the variety test. Yields could probably have been doubled with a liberal application of fertilizer. In the fertilizer test in the same field where fertilizers were used, good yields were secured.

The cotton was planted April 18, and a fair stand obtained. Plants were rather small at maturity and only moderately well fruited. The cotton was not poisoned and boll weevils did considerable damage. There was some wilt and rust damage.

The yields are low but this is to be expected on soil of this type if the cotton is grown without fertilizers. Of the six ranking varieties three are short staple and three long staple. All are rather vigorous growing varieties. It would not be wise to make any definite recommendations on the basis of one year's test. We are inclined to think, however, that the variety chosen should be moderately prolific, vigorous and early. The ranking varieties in the test all meet these requirements fairly well.

TABLE XIX

RANK OF COTTON VARIETIES IN 1929 TESTS

Variety	Bluff Land Baton Rouge	Alluv. Land Baton Rouge	Prairie Land Crowley	Alluv. Land Race-land	Pine Hills De Ridder	Red R. Valley Mel-rose	Red R. Valley Dixie	Red R. Valley Natch-itoches	N. La. Hill Land Homer	N. La. Hill Land Cal-houn	Oua-chita Valley Mon-roe	NE. La. Delta Land St. Joseph	Pine Flats Ham-mond	Av. Rank
Wann. Cleveland	15	20	7	19	18	18	12	14	14	19	14	20	3	14.8
Marett's Cleveland	19	17	11	..	20	12	16	10	18	18	..	..	16	15.7
Wilson Cleveland	14	5	3	15	8	5	1	1	11	6	7	11	2	6.8
Cleveland-54	13	11	9	..	19	13	..	15	..	15	8	..	8	12.3
Half & Half	21	4	8	12	16	16	11	8	10	10	18	21	18	13.3
Dixie-Triumph	1	1	6	10	5	7	6	5	8	11	5	9	12	6.6
Mebane Triumph	18	14	17	20	12	20	21	21	20	21	20	19	20	18.7
Rowden-40	4	8	20	14	1	14	13	13	12	14	4	10	4	10.0
Acala-37	10	18	15	16	10	15	10	18	9	13	15	16	17	14.0
D. & P. L. No. 4	7	22	14	17	13	17	15	11	19	16	9	17	14	14.7
D. & P. L. No. 4-8	5	19	2	13	15	8	8	7	2	2	10	4	11	8.2
Stoneville No. 2	6	16	4	8	11	10	5	6	13	4	6	14	10	8.7
Delfos-911	8	..	10	9	9	6	..	4	..	3	..	3	9	6.8
Delfos-6102-A2C3	11	2	5	2	6	4	2	2	5	12	17	5	7	6.1
Missdel No. 2	12	3	12	6	7	2	9	16	7	7	19	8	13	9.3
Missdel No. 1	17	6	16	7	14	9	17	17	3	17	11	6	19	12.2
Delfos No. 2	9	7	13	1	2	3	4	12	4	1	..	2	5	5.2
Express-317	2	12	1	3	3	1	3	9	1	9	1	1	1	3.6
D. & P. L. No. 6	3	15	19	4	17	11	..	3	15	5	3	7	6	9.0
Wilds No. 2	16	21	18	18	4	19	14	20	17	20	12	18	15	16.3
Deltatype No. 8	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Stoneville No. 1	..	10	11	..	..	..	..	..	..	..	..	..	..	..
Lone Star X Express	..	9	5	..	..	..	..	..	..	..	..	..	..	..
Delfos-625	..	13	..	..	..	..	..	..	..	..	..	..	..	..
Lankart	..	..	..	..	..	..	20	..	..	..	16	12	..	..
Wacona	..	..	..	..	..	..	19	..	..	..	..	13	..	..
Delfos-463	..	..	..	..	..	..	7	..	..	..	13	..	..	..
Greer-Witchita	..	..	..	..	..	..	18	19	..	..	..	15	..	..
Super Seven	..	..	..	..	..	..	..	..	16	..	..	..	..	..

Fig. I Rank on Basis of Value of Product of Varieties in Louisiana Tests in 1929

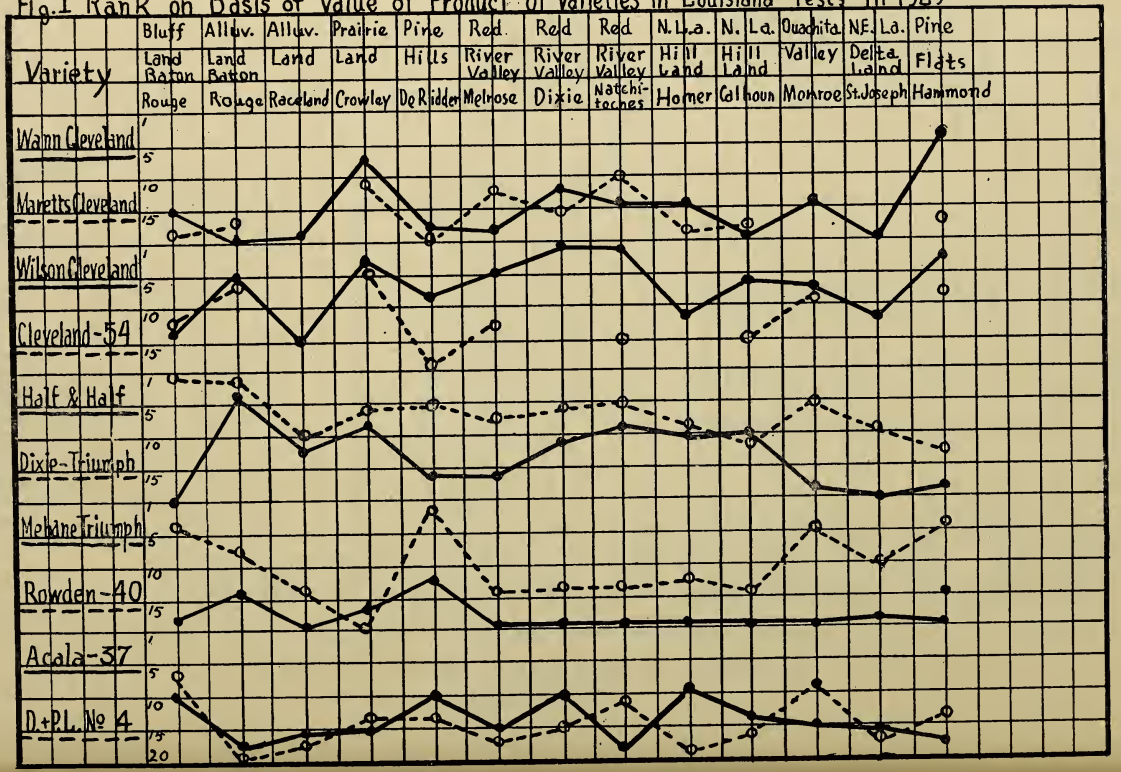

Fig. II Rank on Basis of Value of Product of Varieties in Louisiana Tests in 1929

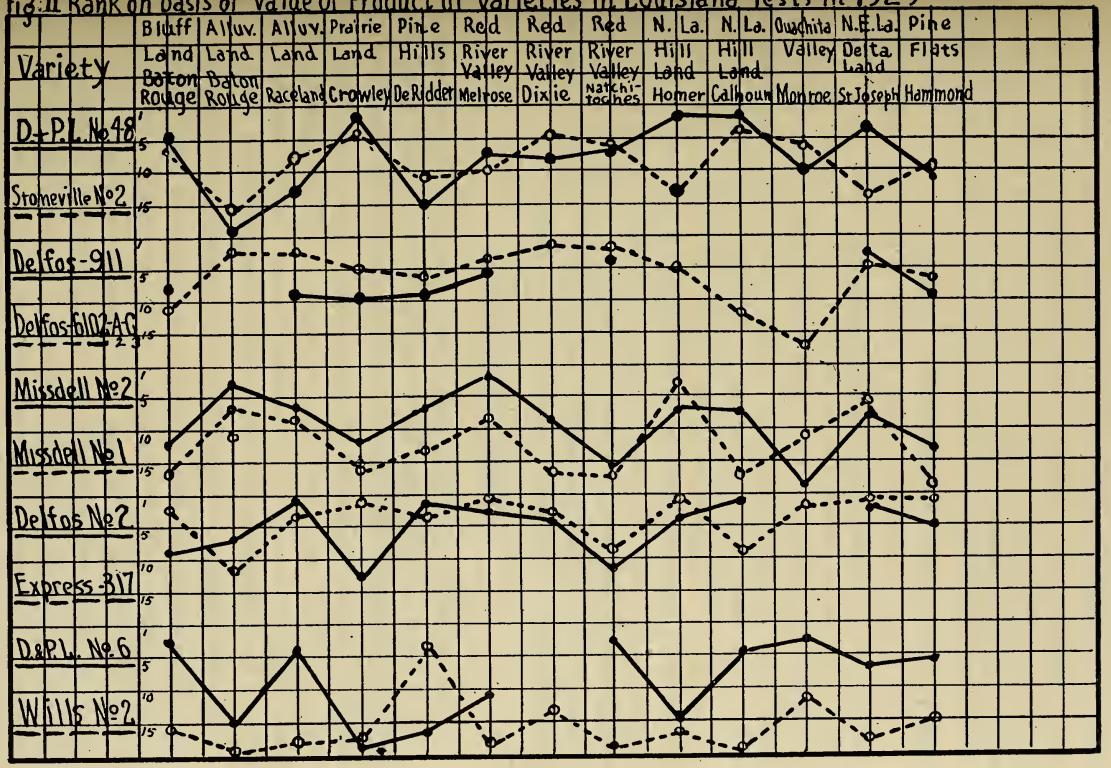

Table XIX shows the comparative ranking of all the varieties used in the tests in the State the past season. On account of varying conditions, it is not to be expected that one variety will rank high in all parts of the State, yet there seem to be some rather wide adaptations shown. Some varieties, such as Express-317, and a few others rank high in a large part of the tests. Some other varieties have a very low rank quite generally.

The graphs in figures 1 and 2 show at a glance the relative standing of varieties in tests in various parts of the State. If the dot indicating the position of a variety in a test is near the top of the space, that means that the variety has done well in that particular test. If the dot is low in the space, the variety has not done well. The ranking runs from one to twenty. The exact position of a dot in a test is without great significance because adverse conditions may have affected the performance of the variety in that particular test, but the general trend of the line running through a large number of tests does mean something. A variety that consistently stands above the middle of the space is above the average in value and is evidently a good variety to plant.

HOME GROWN SEED

Most experimental tests have shown that home grown cotton seed, if from varieties that have been well bred, makes more productive plants than seed brought in from a distance. Many cotton growers have noticed that they get better yields from imported seed the second year they grow the variety. In one case that has been brought to the writer's attention the negro tenants had noticed the difference and were asking for second year seed.

In the Statewide variety tests in Louisiana the past season home grown seed of four varieties were used in tests including twenty varieties. The four local varieties ranked first, second, fourth, and eighth. This was well above average rank. Similar data have been obtained every year tests have been conducted. It is possible that a part of the difference in rank was due to the breeding or inherent qualities of the varieties but we are inclined to think that it was not all due to that.

Seed from certain areas in nearby States where conditions are similar to local conditions may be satisfactory, but seed of varie-

ties adapted to very different regions, as are found in parts of Texas for instance, are not likely to prove satisfactory.

It is rather unfortunate that there are no commercial cotton breeders in Louisiana that are doing an extensive business. A movement is on foot, however, to make arrangements with certain responsible growers to increase seed of the best strains that are developed by the Experiment Station. This should help considerably.

POISONING BOLL WEEVILS

Probably most cotton growers in Louisiana are satisfied that it pays to poison boll weevils. They have doubtless often observed that if there are many weevils present the man who poisons thoroughly makes three fourths of a bale per acre or more while the man in the same locality who does not poison has to pick five acres or more to get a bale.

The methods of control worked out by the Boll Weevil Laboratory at Tallulah are well known by county agents and most cotton growers. These methods, if followed closely, are very satisfactory for North Louisiana but they do not apply quite so well in South Louisiana where cotton becomes very rank, where weevils are always very plentiful, and where there are daily showers over much of the period that the cotton is fruiting.

In our weevil control work here at Baton Rouge we have made some changes in the regular method of weevil control. We have found it advisable:

1st. To plant only medium early.

2nd. To plant all the cotton near the same time.

3rd. To give the cotton a thorough pre-square poisoning.

4th. To watch the cotton closely for adult weevils and for weevil pupae that are about to hatch out. The adult weevils may be seen in the cotton blooms during the middle of the day. If there are many adult weevils in the cotton blooms, or many pupae which will hatch soon, extra effort is made to keep a liberal supply of poison on the cotton plants.

5th. To apply ten pounds of calcium arsenate dust at each application after the plants become large. We have secured much better control by using the heavier application of poison. With

large plants much more poison is needed to give the leaves a coating of dust particles that is equivalent per unit area to the coating they receive when small. It is probable, too, that with a heavier application more poison remains on the plants after a light rain.

If a cart-type cotton duster is used, which is a very satisfactory type for the grower with moderate acreage, an application of ten pounds per acre will cost about one dollar per acre for each application of poison. From four to eight applications will be needed to hold the weevils in check. This seems to be rather costly but will be well repaid in the additional crop made. Growing cotton in South Louisiana is a losing venture unless a fair degree of weevil control is secured.

FUNGOUS DISEASES OF COTTON PLANTS

Cotton plants grown in South Louisiana are subject to several different diseases that are caused by fungi. The most important of these are damping off diseases which kill young plants about the time they emerge from the ground; cotton wilt or black root which usually injures or destroys plants after they reach the blooming stage and boll rots which destroy bolls as they approach maturity.

The only practical method of controlling the damping off disease is to delay planting until the land is warm enough for the plants to germinate quickly and grow off rapidly. With seasonable weather, the plants outgrow the diseases and are bothered but little.

Cotton wilt may be avoided by planting a wilt resistant variety. Dixie-Triumph and Dixie-14 are probably the best wilt resistant varieties for planting in Louisiana.

It is a difficult matter to control the boll rot diseases. We have observed, however, that they are less troublesome on cotton that is planted moderately late, and on cotton that is not rank in its growth. There seems to be some relation, too, as was brought out in Table IV, between wilt resistance and boll rot resistance. Varieties most susceptible to wilt are also somewhat more susceptible to boll rot it appears.

PROMINENT VARIETIES

A brief description is given of the following compartively new varieties which have shown merit in our tests. Characteristics such as lint length, percentage, etc., given in the tables are not repeated here.

Wilson Cleveland—This variety was developed by M. W. H. Collins in Northern Georgia, but transferred to Wilson, Arkansas, in 1925, and increased. The name Collins' Cleveland has been used for the variety in some of our reports. The plants of this variety are medium sized, usually compact, rather early and prolific. The staple is rather short and irregular and the compactness is probably a disadvantage in that with this type of plant more trash is gathered with the cotton in picking.

Dixie-Triumph—This variety which is considered to be a hybrid between Mebane Triumph and Dixie originated in South Carolina a few years ago. It resembles the Dixie parent. Plants are rather large and growthy, very resistant to wilt and apparently somewhat more resistant to other diseases than are several other varieties. It is only medium early and prolific but yields well.

Rowden-40—This is a selection from Texas Rowden made by J. O. Ware of the Arkansas Experiment Station. It appears to be a hybrid between Rowden and some other smaller bolled more prolific variety. Plants are rather large and vigorous and fairly productive.

D. & P. L. No. 4-8—This is a selection from D. & P. L. No. 4 made by E. C. Ewing, cotton breeder for the Delta and Pine Land Co., of Scott, Mississippi. This variety is similar to D. & P. L. No. 4 in general characteristics but has slightly shorter staple and considerably better lint percentage. It is medium in prolificacy and wilt resistance.

Missdel No. 2—This is a selection from Delfos-6102 and was known for some years as Delfos-1341. The selection was made by the cotton breeder at the Delta Branch Experiment Station, Stoneville, Mississippi. Plants are small, early, and prolific. The lint percentage is higher than in most other strains of Delfos.

Express-317—This variety and the three following were originated by the writer at Stoneville, Mississippi, when he was plant breeder for the Stoneville Pedigreed Seed Co. Express-317 was

developed from a plant selection made in a field of Express-432. Plants are medium large, vigorous and fairly wilt resistant; foliage is moderately light and the variety early and prolific.

Delfos No. 2 was selected from Delfos-631, and differs from the parent strain in having smaller bolls, smaller leaves, and more vigorous and more prolific plants.

Delfos-6102-2323 was selected in a field of Delfos-6102 and has many of the characteristics of the original strain, being early and very prolific. The staple length is a little above the average of Delfos strains.

Stoneville No. 2—The original plant of Stoneville No. 2 was selected in a field of Lone Star-65. Plants are medium sized, rather early and prolific, and medium wilt resistant. In general characteristics, this variety resembles Delfos but is slightly taller, more wilt resistant, and has a better lint percentage.

SUMMARY

1. Cotton is the most important crop grown in Louisiana. Its value in 1929 approximated $75,000,000.

2. Louisiana ranks third among the states of the Cotton Belt in the production of long staple cotton and eighth or ninth in total production of cotton.

3. Although there are some inferior varieties still grown in Louisiana, there is a marked trend toward the introduction of better varieties.

4. Planting a well adapted variety is the easiest way to increase yield per acre.

5. Seed grown in Louisiana will probably produce better yielding plants than seed grown in other states. Four of the twenty varieties planted in the Louisiana tests in 1929 were from home grown seed. These varieties ranked first, second, fourth and eighth. This was well above the average. Similar results have been obtained in other years.

6. Over much of Louisiana during most seasons, it is impossible to grow a good crop of cotton without poisoning boll weevils.

7. Tests during the past three years have indicated that Wilson Cleveland, D. & P. L. No. 4-8, Dixie-Triumph, Stoneville No. 2, Delfos, D. & P. L. No. 6, and Express 317 are generally the

most paying cottons to plant. The adaptation to particular regions may be learned by study of regional test reports.

SOURCE OF SEED

Coker Pedigreed Seed Co., Hartsville, S. C.—Cleveland-5-2, Cleveland-884, Deltatype-7, Foster-4, Lightning Express-7, Super Seven-5, Wilds No. 2.

Delta and Pine Land Co., Scott, Miss.—D. & P. L. No. 4-8, D. & P. L. No. 6, D. & P. L. No. 4128A-21-32, D. & P. L. No. 5242A-310-47.

Delta Experiment Station, Stoneville, Miss.—Delfos-6102-2103, Delfos-910.

Robert Dortch, Scott, Ark.—Rowden-40.

Will Dockery, Dockery, Miss.—Delfos-911.

Experiment Station, Marianna, Ark.—Rowden-2119, Rowden-3054, Rowden-2088, Express-17.

R. L. Fulcher, Louisville, Miss.—Cleveland-54.

Greer Staple Cotton Breeding Farms, Iowa Park, Texas—Greer-Witchita.

Lankart Bred Seed Farms, Waco, Texas—Lankart, Wacona.

Louisiana Experiment Station, Baton Rouge, La. — Dixie-Triumph, Delfos No. 2, Delfos-6102-2323, Delfos-6102-625, Express-317, Lone Star X Express, Stoneville No. 1.

Marett Farm & Seed Co., Westminster, S. C.—Marett's Cleveland-7, Marett's Cleveland-6B, Marett's Cleveland-5.

Mrs. A. D. Mebane, Lockhart, Texas—Mebane Triumph.

North La. Experiment Station, Calhoun, La.—D. & P. L. No. 4.

Loy E. Rast, Newport, Ark.—Acala-37.

J. O. M. Smith, Commerce, Ga.—Piedmont, Cleveland.

Stoneville Pedigreed Seed Co., Stoneville, Miss.—Delfos-6102-A_2C_3, Cook-1010-519, Stoneville No. 2, Stoneville-690, Stoneville No. 3, 631-633, 6102 x 65-632, 6102-324-6207, 6102-324-6106, 6102-324-6100.

Mrs. W. H. Stovall, Stovall, Miss.—Missdel No. 1, Missdel No. 2.

B. F. Summerour, Norcross, Ga.—Half and Half.

Wannamaker-Cleveland Seed Co., St. Matthews, S. C.—Wannamaker-Cleveland, Wannamaker Staple Cleveland.

Lee Wilson & Co., Wilson, Ark.—Wilson Cleveland.

D. W. Wilson, Duluth, Ga.—Wilson Staple.